CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 79-98

NPDES NO. CA0004871

WASTE DISCHARGE REQUIREMENTS FOR:

PACIFIC GAS & ELECTRIC COMPANY
AVON POWER PLANT
AVON, CONTRA COSTA COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region, (hereinafter Board) finds that:

1. Pacific Gas and Electric Company, hereinafter discharger, submitted an application dated May 31, 1979, for reissuance of NPDES permit No. CA0004871 for its Avon Power Plant. This permit was originally issued by the Board on December 17, 1974, as Order No. 74-202 and amended on July 20, 1976, in Order No. 76-73.

2. The Avon Power Plant is a 50 megawatt gas and oil fired generating plant which produces 960 megawatt hours and 2000 tons of steam per day. The discharger discharges wastewater containing pollutants into Suisun Bay, a water of the United States, through a diffuser shared with the Avon Refinery. The wastewater consists of cooling tower blowdown, boiler blowdown, low volume wastes (softener blowdown; evaporator blowdown; air preheater, fireside, and waterside washes; and other miscellaneous wastes), and stormwater. All of these wastes are combined for lime addition followed by clarification, dual media filtration, and pH adjustment. The average flow is approximately 250,000 gallons per day (gpd) while the maximum flow is about 300,000 gpd. These flow values may increase when the discharger begins using Contra Costa County Water District reclaimed water. (Waste 001)

   Waste 002 is storm runoff from the fuel oil storage tank area. It is discharged into Pacheco Creek at a point about one half mile upstream of Waterfront Road. Waste 002 is not treated, and its discharge rate has not been measured. In the future this waste may be routed through the treatment system.

3. On March 16, 1978, the State Water Resources Control Board adopted a Cease and Desist Order (Order No. 78-5, Exhibit D) for the discharger. The discharger complied with that Order by installing the treatment system described in Finding 2, above.

4. In April 1975 the Board adopted a Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan).

5. The beneficial uses of Suisun Bay and contiguous waters, as identified in the Basin Plan, are:

   a. Recreation (contact and non-contact).
   b. Fish migration and spawning.
   c. Habitat for wildlife and estuarine organisms including some rare and endangered species.
   d. Industrial water supply.
   e. Esthetic enjoyment.
   f. Navigation.
   g. Commercial and sport fishing.

6. Effluent limitation, toxic effluent standards, established pursuant to Sections 208(b), 301, 304, and 307 of the Federal Water Pollution Control Act and amendments thereto are applicable to the discharge.

7. This project involves the continued operation of a privately-owned facility with negligible or no expansion of use beyond that previously existing. Consequently, this project will not have a significant effect on the environment based upon the exemption provided in Section 15101, Title 14, California Water Code.

8. The Board has notified the discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge and has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.

9. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED, that the Avon Power Plant of Pacific Gas & Electric Company, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder and the provisions of the Federal Water Pollution Control Act and regulations and guidelines adopted thereunder, shall comply with the following:

A. Effluent Limitations

1. The discharge of Waste 001 containing constituents in excess of the following limits is prohibited:

Constituent	Units	30-Day Average	Maximum Daily
a. Total suspended solids	kg/day	*	*
	mg/l	30	100
b. Oil & grease	kg/day	*	*
	mg/l	15	20

2. The discharge of boiler blowdown containing constituents in excess of the following limits is prohibited:

Constituent	Units	30-Day Average	Maximum Daily
a. Iron, total	kg/day	*	*
	mg/l	1.0	1.0
b. Copper, total	kg/day	*	*
	mg/l	1.0	1.0

*Allowable mass emission rates shall be calculated by multiplying the allowable concentration times the actual flow.

3. Waste 001 shall not contain a chlorine residual in excess of 0.0 mg/l.

4. The temperature of Waste 001 shall not exceed the natural temperature of Suisun Bay by more than 20°F.

5. In any representative set of samples Waste 001 as discharged shall meet the following limit of quality:

> The survival of test fishes in 96-hour bioassays of the effluent shall be a 90th percentile value of not less than 50 percent survival.

6. The pH of Waste 001 shall not be less than 6.0 or greater than 9.0.

7. The concentration of oil and grease in Waste 002 shall not exceed 15 mg/l.

B. Receiving Water Limitations

1. The discharge of waste shall not cause the following conditions to exist in waters of the state at any place.

   a. Floating, suspended, or deposited macroscopic particulate matter or foam;

   b. Bottom deposits or aquatic growths;

   c. Alteration of turbidity or apparent color beyond present natural background levels;

   d. Visible, floating, suspended, or deposited oil or other products of petroleum origin;

   e. Toxic or other deleterious substances to be present in concentrations or quantities which will cause deleterious effects on aquatic biota, wildlife, or waterfowl, or which render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentration.

2. The discharge of waste shall not cause the following limits to be exceeded in waters of the State in any place within one foot of the water surface:

a.	Dissolved oxygen	7.0 mg/l minimum. Annual median - 80% saturation. When natural factors cause lesser concentration(s) than those specified above, then this discharge shall not cause further reduction in the concentration of dissolved oxygen.
b.	Dissolved sulfide	0.1 mg/l maximum.
c.	pH	Variation from natural ambient pH by more than 0.2 pH units.
d.	Un-ionized ammonia	0.025 mg/l as N, Annual Median 0.4 mg/l as N, Maximum.

3. Waste 001, either individually or combined with other discharges, shall not create a zone, defined by water temperatures of more than 1°F above natural receiving water temperature, which exceeds 25 percent of the cross-sectional area of Suisun Bay at any point.

4. No discharge shall cause a surface water temperature rise greater than 4°F above the natural temperature of the receiving waters at any time or place.

5. Compliance with Receiving Water Limitations is the joint responsibility of all users of the outfall and diffuser. The discharge of each user to the outfall shall be monitored so that individual responsibility for any violation of these limits can be determined.

6. The discharge shall not cause a violation of any applicable water quality standard for receiving waters adopted by the Board or the State Water Resources Control Board as required by the Federal Water Pollution Control Act and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Federal Water Pollution Control Act, or amendments thereto, the Board will revise and modify this Order in accordance with such more stringent standards.

C. Provisions

1. Waste 001 shall receive an initial dilution of at least 10:1.

2. The discharge of poly-chlorinated biphenyls into waters of the State is prohibited.

3. There shall be no bypass of untreated wastewater to waters of the State.

4. This Board's Order Nos. 74-202, 76-73, and Exhibit D of the State Board Order No. 78-5 are hereby rescinded.

5. This Order includes the attached "Standard Provisions, Reporting Requirements and Definitions" dated April 1977 except for items A.5., A.12., B.2., and B.5.

6. This Order shall serve as a National Pollutant Discharge Elimination System permit pursuant to Section 402 of the Federal Water Pollution Control Act, or amendments thereto, and shall take effect at the end of ten days from date of hearing provided the Regional Administrator, U. S. Environmental Protection Agency, has no objections.

7. This permit may be modified, or, alternatively, revoked and reissued, to comply with any applicable effluent limitation issued pursuant to the order the United States District Court for the District of Columbia issued on June 8, 1976, in Natural Resources Defense Council, Inc. et. al. v. Russel E. Train, 8 ERC 2130 (D.D.C. 1976), if the effluent limitation so issued.

   (a) is different in conditions or more stringent than any effluent limitation in the permit; or

   (b) controls any pollutant not limited in the permit.

8. This Order expires on September 30, 1980, and the discharger must file a Report of Waste Discharge in accordance with Title 23, California Administrative Code, not later than 180 days in advance of such date as application for issuance of new waste discharge requirements.

I, Fred H. Dierker, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on August 21, 1979.

FRED H. DIERKER
Executive Officer

Attachments:
Standard Provisions, Reporting Requirement & Definitions dated - April 1977
Self-Monitoring Program

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM
FOR

PACIFIC GAS & ELECTRIC COMPANY

AVON POWER PLANT

NPDES NO. CA 0004871

ORDER NO. 79-98

CONSISTS OF

PART A, dated 1/78

AND

PART B

PART B

I. DESCRIPTION OF SAMPLING STATIONS

A. EFFLUENT

Station	Description
E-001	At a point in the outfall line where all (and only) power plant wastes are present and all treatment is complete.
E-002	At the valves which release stormwater from the oil tank storage area.
E-003	At a point in the boiler blowdown line where all boiler blowdown is present prior to mixing with other wastes.

B. MISCELLANEOUS REPORTING

1. In the annual summary for each calendar year, confirm that no poly-chlorinated biphenyls were present on the plant site during that year.

II. SCHEDULE OF SAMPLING AND ANALYSIS

A. The schedule of sampling and analysis shall be that given as Table I.

III. MODIFICATION OF PART A

Delete: C.3, C.4, C.5.a, C.5.c, C.5.d, D.3, D.4, and E.4.

I, Fred H. Dierker, Executive Officer, hereby certify that the foregoing Self-Monitoring Program:

1. Has been developed in accordance with the procedure set forth in this Regional Board Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in Regional Board Order No. 79-98.

2. Is effective on the date shown below.

3. May be reviewed at any time subsequent to the effective date upon written notice from the Executive Officer or request from the discharger and revisions will be ordered by the Executive Officer.

FRED H. DIERKER
Executive Officer

Attachment:
Table I

Effective Date _____

TABLE I

SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSES

SAMPLING STATIONS	E-001				E-002		E-003		
TYPE OF SAMPLES	Cont	G	C-24	O	G	O	G		
FLOW RATE (mgd)			D				(3) M		
CHLORINE RESIDUAL & DOSAGE (mg/l & kg/day)									
SETTLEABLE MATTER (ml/l-hr & cu. ft./day)									
TOTAL SUSPENDED MATTER (mg/l & kg/day)			(2) M						
OIL & GREASE (mg/l & kg/day)		(1) M(2)			E				
FISH TOXICITY, 96-hr. %SURVIVAL IN UNDILUTED WASTE			Q						
PH (units)	Cont				E				
TEMPERATURE (^{O}C)	Cont								
COPPER (mg/l & kg/day)							(2) M(3)		
ALL APPLICABLE STANDARD OBSERVATIONS				(2) M		E			
IRON (mg/l & kg/day)							(2) M(3)		
TOTAL IDENTIFIABLE CHLORINATED HYDROCARBONS (mg/l & kg/day)									

LEGEND FOR TABLE

TYPE OF SAMPLES

G = grab sample
C-24 = composite sample - 24-hour
Cont = continuous sampling
O = observation

TYPES OF STATIONS

E = waste effluent stations

FREQUENCY OF SAMPLING

E = each occurrence (of runoff discharge)
D = once each day
W = once each week
M = once each month
Cont = continuous
Q = quarterly

NOTES FOR TABLE I

1. Separately collect and analyze three grab samples for oil and grease on each sampling day. Use the arithmetic average as the concentration value for that day, and calculate kg/day discharge rate from that value and the total flow for the day.

2. If any monthly sample is found to contain a constituent in excess of the 30-day average limitation, the analyses shall be performed weekly until a 30-day average shall have been determined which indicates that the waste is in compliance.

3. Estimates or calculations of boiler blowdown flow shall be determined for the day on which samples are collected.